

FAQs about Surtass LFA Sonar (2000)

What is SURTASS LFA?

The Surveillance Towed Array Sensor System (SURTASS) LFA sonar is a long-range, low frequency underwater sonar system that has both active and passive components and is used by the U.S. Navy to locate submarines.

What has the U.S. Navy done to test the LFA sonar system?

NOAA Fisheries understands that the U.S. Navy has conducted experiments for several years to determine the feasibility of the SURTASS LFA sonar system. The testing consisted of three phases of research on the effects of SURTASS LFA sonar on marine mammals. This research was completed in March 1998, and the ship has not deployed the sonar system since that time.

What did the results show? Were marine mammals affected, and how much?

The scientific research program for determining impacts on large whales (those species potentially most susceptible) from LFA sonar focused on blue and fin whales in the southern California Bight (Sept-Oct. 1997), gray whales migrating past the central California coast (January 1998), and humpback whales off Hawaii (February-March 1998). These studies included three important behavioral contexts for baleen whales: feeding, migrating and breeding.

Essentially, the three research phases did not support the earlier hypothesis that most baleen whales exposed to received levels (RLs) near 140 dB would exhibit disturbance of behavior and avoid the area. These experiments, which exposed baleen whales to RLs ranging from 120 to about 155 dB, detected only minor, short-term behavioral responses.

Although the scientific research program did not address longterm or cumulative effects on marine mammals, because the LFA sonar will only be in a single area for a relatively short period of time, and possibly not return to that area for years, no longterm impacts on individual or populations of marine mammals are anticipated.

Is LFA sonar going to add to the problem of increasing levels of sound pollution in the ocean?

There are two types of noise in the ocean, natural and anthropogenic (human-caused). Natural noise is caused by wind, waves, rain, earthquakes, and marine life. Human-caused noise is created mostly by shipping and in inshore waters by seismic activities, construction, and recreational boaters. Both ships and boats have sonar noise in addition to vessel noise from its engines and props.

SURTASS LFA sonar is a coherent low frequency signal with a duty cycle of less than 20%, operating for a maximum of only 432 hours/year for each system and a total of 72 days/year for all four LFA sonar systems combined. This compares to an approximate 21.9 million days/year for the world's shipping industry (presuming an 80% activity rate all the time). Therefore, by definition, all noise sources, natural and human-caused, result in the total level of background noise in the oceanic region wherein it takes place.

However, SURTASS LFA sonar noise would make up a very small part of the human-caused noise pollution in the ocean.

What sorts of indications or information would NOAA Fisheries need to deny this permit application?

NOAA Fisheries is required to make its determination whether or not the SURTASS LFA sonar has more than a negligible impact on species or stocks of marine mammals based on the best scientific information available. At this time, NOAA Fisheries has made a preliminary determination based on the scientific literature that the disturbance to marine mammals by SURTASS LFA sonar is not having a significant impact. This scientific research was conducted by the Scientific Research Program funded by the U.S. Navy, but conducted by independent scientists.

If scientific information is provided to NOAA Fisheries during the proposed rule comment period that indicates that its preliminary determination is in error, NOAA Fisheries will evaluate both data sets to make its final determination. If, based on the best scientific information available, NOAA Fisheries cannot make a determination that the harassment of marine mammals during SURTASS LFA sonar operations will have a negligible impact on affected marine mammal species and stocks (not necessarily on individual animals), or if a determination is made under section 7 of the Endangered Species Act (ESA) that the action is likely to jeopardize the continued existence of a marine mammal species or stock listed as threatened or endangered under the ESA, then NOAA Fisheries cannot issue the U.S. Navy a Letter of Authorization under the MMPA.

Are marine scientists concerned about the deployment of this system, and what is NOAA Fisheries doing to listen to their views?

NOAA Fisheries has a responsibility to make the required determinations under the MMPA based on the best scientific information available. At this time, this information, which is based on marine mammal research available, indicates that deployment of SURTASS LFA sonar will not have more than a negligible impact on affected marine mammal stocks. If marine scientists have scientific information that contradicts the information used by NOAA Fisheries in its preliminary determination, they should provide that data to NOAA Fisheries during the public comment period on the proposed rule to authorize the incidental harassment of marine mammals due to SURTASS LFA sonar operations.

Do environmentalists, fisherman, and scientists oppose this system deployment?

While a number of environmental groups are in opposition to LFA sonar, NOAA Fisheries is unaware of any organized opposition by commercial and recreational fishermen. Such opposition is also unlikely since fishermen are well aware of their need to also use loud sonar in order to locate fish schools. Currently, NOAA Fisheries is in a 45-day comment period on its proposed rule that would authorize the U.S. Navy to take marine mammals incidental to operation of SURTASS LFA sonar.

NOAA Fisheries welcomes additional scientific information that either supports or refutes its preliminary findings that the harassment will not have more than a negligible

impact on marine mammal stocks. In addition, members of the public in opposition to deployment of SURTASS LFA sonar were offered an opportunity by the U.S. Navy to express their concerns during the comment period on the Navy's Draft Overseas Environmental Impact Statement on this action. These concerns have been addressed by the U.S. Navy as part of its Final Environmental Impact Statement on the proposed SURTASS LFA sonar deployment.

If the Navy starts using this system throughout the world, will there be even more strandings like in the Bahamas?

The Navy's SURTASS LFA sonar system will not be deployed so that loud sounds (i.e., greater than 180 dB) will occur within 12 nautical miles of any coast including offshore islands anywhere in the world. In addition, it will not operate in certain designated Offshore Biologically Important Areas, such as the critical habitat for northern right whales off the U.S. East Coast, the Subantarctic convergence zone off Antarctica, the Costa Rican dome off Central America, and Penguin Bank off Hawaii. Because of its offshore operations, the relatively small area where marine mammals might be harmed and the visual, passive acoustic and active acoustic (fish-finder-like sonar) monitoring that will be employed, it is very unlikely that there would be any strandings associated with SURTASS LFA sonar operations. If any do occur, NOAA Fisheries will coordinate with the U.S. stranding networks along whichever coast(s) LFA sonar is operating to ensure that strandings will be thoroughly investigated.

What is the U.S. Navy doing to minimize LFA sonar's impact on marine mammals?

As part of its plan to minimize effects on marine animals, the U.S. Navy has proposed visual monitoring and both passive and active (fish finding) sonar monitoring to detect marine mammals and sea turtles prior to their entering the SURTASS LFA sonar operating area. Officials have also designed shutdown criteria to prevent the likelihood of injury to marine mammals.